

Abstract Submitted
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Astrophysical Applications of Relativistic Shear Flows EDISON LIANG, Rice University — We review recent PIC simulation results of relativistic collisionless shear flows in both 2D and 3D. We apply these results to spine-sheath jet models of blazars and gamma-ray-bursters, and to shear flows near the horizon of rapidly spinning black holes. We will discuss magnetic field generation, particle energization and radiation processes, and their observational consequences.

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